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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,153	02/11/2004	Hsiu-Chuan Lien	MSCP0024USA	2152

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EXAMINER	
WEI, ZHENG	

ART UNIT	PAPER NUMBER
2192	

NOTIFICATION DATE	DELIVERY MODE
10/10/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/708,153	LIEN ET AL.	
	Examiner	Art Unit	
	Zheng Wei	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 July 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4, 6-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Remarks

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/25/2007 has been entered.

2. This office action is in response to the amendment filed on 07/25/2007.

3. Claims 1 and 2 have been amended.

4. Claims 10-16 have canceled.

5. The objection to claims 10-16 is withdrawn as applicant canceled the claims.

6. The 35 U.S.C. 112 second paragraph rejection to claims 1-4, 6-8 and 10-16 is withdrawn in view of applicant's amendment for claims 1-4, 6-8 and cancellation of claims 10-16

7. Claims 1-4 and 6-8 remain pending and have been examined.

Response to Arguments

8. Applicant's arguments filed on 07/25/2007 have been fully considered but they are not persuasive. For example:

At page 5, lines 23-26 and page 6, first paragraph the Applicant argues that claim 1 is not anticipated by Schieve. Because the limitation of step "d" is not taught or

suggested by Schieve. However, the Examiner respectively disagrees with that. For the step "c", the Examiner's position is that the claim language "resetting a parameter of the event" can be reasonable and broadly interpreted as any parameter/variable related to testing event/condition. Schieve, at Fig.4, discloses that each time after executing step 470 (loop), a parameter/variable about testing result has to be reset to "Yes" or "No" at step 480. Therefore, Schieve's "Yes" or "No" parameter/variable about the executing test does disclose the limitation of step "c". The same reason for step "d", after the parameter being reset to "Yes/No", the executing path can be undergo to "Yes" path pr "No" path (see for example, Fig.4, step 490). Therefore, Schieve does disclose all the limitation of claim 1.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Schieve (Schieve et al. US 5,463,766).

Claim 1:

Schieve discloses a method for testing and debugging computer programs, the method comprising:

- Setting a plurality of breakpoints corresponding to a plurality of events in an implementation under test, each event being a test executed to a peripheral device (see for example Fig.4, step 410, "Detect Peripherals"" and related text) and taking a general processing path when the peripheral device is working well (see for example, step 480, "Did test pass? Yes" and related text) or an error processing path when the peripheral device is out of order (see for example, step 490 "Display Error/Status and Information" and related text);
- Executing the implementation under test for outputting a diagnosis code (fig.4, step 480, output YES/NO) of a breakpoint (see for example, step 470, "Execute Test" and related text);
- Resetting a parameter of the event corresponding to the diagnosis code (see for example, Fig.4, step 480, "Did Test Pass?" and "Yes/No" paths and related text; The "Yes/No" parameter has to be reset each time after step 470);
- Executing the event according to the reset parameter for making the event undergo the error processing path (see for example, step 490 "Display Error/Status and Information" and related text);

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schieve (Schieve et al. US 5,463,766)

Claim 7:

Schieve discloses the method for program debugging as in claim 1 above, which has an error handler to display error message (see for example, Fig.4, step 490, "Display Error /Status and Information"). Schieve also discloses a step of system reset (see for example, Fig.3, step 380, "Reset Button Pressed?"), but does not explicitly disclose the error handler is a system reset. However, it would have been obvious to one having ordinary skill in the art at the time the invention was make to use the method of system reset to handle found error. One would have been motivated to do so to reset the system to prevent whole system crash when some severe bugs occur (see for example, Fig.3 step 380, "Reset Button Pressed?" option "Yes").

13. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schieve (Schieve et al. US 5,463,766) in view of Sanchez (Sanchez et al., US 6,477,666)

Claim 2:

Schieve also discloses the method for program debugging as in claim 1, wherein the method further comprising: after completing the steps of claim 1, repeating last 3 steps for making the implementation under test make the event undergo a certain processing path. (see for example, loop from steps 440 to 490, "Yes/No" paths and related text). But Schieve does not explicitly disclose making the implementation under test make all events undergo the error processing path. However, Sanchez in the same analogous art of testing the software reliable and proper handing of various faults and exceptions under various conditions, discloses a method to reset parameter(inject fault) and execute testing (see for example, Fig.6, about resetting attributes parameter, "Fail", "Retry", "Abort"; Fig.7, item 44, "Inject the fault based upon the value of a variable" and related text). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Sanchez's method to reset parameter in Schieve always to error status (Fig.4, step 480, parameter: "No"). One would have been motivated to do so to test the reliable and proper handing of various faults and exception under various conditions as suggested by Sanchez (see for example, ABSTRCT)

14. Claims 3-4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schieve (Schieve et al. US 5,463,766) in view of Phillips (Phillips et al., US 5,321,828)

Claim 3-4:

Schieve discloses the method for program debugging as in claim 1 above, but does not explicitly disclose the breakpoints are set ahead of program codes of the corresponding events or after program codes of the corresponding events. However, Phillips in the same analogous art of an in-circuit emulator for hardware/software development and debugging microprocessors discloses that a user to set any number of breakpoints all at the same place in the program, or at different places (see for example, col.26-col.27, section "Setting Breakpoints" and related descriptions). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to set breakpoints anywhere in the code in order to adequately support execution control functionality and provide the rich set of functionality needed for the debugger. One would have been motivated to set breakpoints before or after the program codes of the corresponding events to narrow down the places where the bugs might occur.

Claim 8:

Schieve discloses the method for program debugging as in claim 1 above which has an error handler to display error message, but does not explicitly disclose the error handler is a system execution interrupt. However, Phillips in the same analogous art of an in-circuit emulator for hardware/software development and debugging microprocessors discloses that execution interrupt (see for example, col.72, lines 60-67, "single interrupt request line"). Therefore, it would have been

obvious to one having ordinary skill in the art at the time the inversion was make to use the method of system execution interrupt to allows the control processor to monitor the Clock Detect signals which is suggested by Phillips. One would have been motivated to do so to stop executing or suspend current process to trace the problem.

15. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schieve (Schieve et al. US 5,838,975) in view of Robinson (Jeffrey I. Robinson, US 5,768,591)

Claim 6:

Schieve discloses the method for program debugging as in claim 1 above, but does not explicitly disclose that the error handler is an audible tone. However, Robinson discloses a similar method for program debugging as in claim 1 above which the error handler is an audible tone. (Fig.4, items 172, 164, col.12, lines 64-67, "A sound generator 164 is provided and controlled by the message parser and error handler 172"). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use "sound generator" to replace Schieve's method of error handler. One would have been motivated to do so to generate alarm to alert the user when the bug occurs.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Gergen et al., (US 2004/0019831 A1) discloses a method and apparatus for debugging a data processing system;
- Rebert Hundt (US 2004/0205720 A1) discloses a method for augmenting debuggers;
- Yee et al., (US 6598178 B1) discloses a peripheral breakpoint signaler;

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zheng Wei whose telephone number is (571) 270-1059 and Fax number is (571) 270-2059. The examiner can normally be reached on Monday-Thursday 8:00-15:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571- 272-1000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ZW

TUAN DAM
SUPERVISORY PATENT EXAMINER